

What is claimed is:

- 1 1. A method for use in a wireless communications network, comprising:
2 in a reverse wireless link, communicating information relating to status of a
3 buffer in a mobile station; and
4 in the reverse wireless link, communicating information relating to a data rate
5 used by the mobile station when transmitting over the reverse wireless link.
- 1 2. The method of claim 1, wherein communicating information relating to the
2 status of the buffer comprises communicating information relating to an occupancy of
3 a data buffer.
- 1 3. The method of claim 1, wherein communicating information relating to the
2 data rate comprises communicating information relating to a maximum data rate
3 supportable by the mobile station over the reverse wireless link.
- 1 4. The method of claim 3, wherein communicating the maximum data rate
2 supportable by the mobile station comprises communicating a traffic-to-pilot ratio to
3 indicate the maximum data rate supportable by the mobile station.
- 1 5. The method of claim 1, further comprising detecting whether a trigger
2 condition has occurred,
3 wherein communicating the information relating to the status of the buffer and
4 the information relating to the data rate is performed in response to occurrence of the
5 trigger condition.
- 1 6. The method of claim 5, wherein detecting whether the trigger condition has
2 occurred comprises detecting whether one of plural trigger conditions has occurred.
- 1 7. The method of claim 6, wherein detecting whether one of plural trigger
2 conditions has occurred comprises detecting for the following condition: a maximum
3 time duration has elapsed, and a buffer to contain data to transmit over the reverse
4 wireless link is not empty.

1 8. The method of claim 7, wherein detecting whether one of plural trigger
2 conditions has occurred comprises detecting for the following condition: a minimum
3 time duration has elapsed, and a buffer to contain data to transmit over the reverse
4 wireless link is not empty.

1 9. The method of claim 8, wherein detecting whether one of plural trigger
2 conditions has occurred comprises detecting for the following condition: a current
3 power headroom differs from a previous power headroom by greater than a
4 predetermined amount, a predetermined time duration has elapsed from a time when
5 information relating to a status of a buffer in the mobile station and information
6 relating to a data rate over the reverse wireless link was last sent, and a buffer to store
7 data for transmission over the reverse wireless link is not empty.

1 10. The method of claim 1, wherein communicating the information relating to a
2 status of a buffer in the mobile station and information relating to a data rate over the
3 reverse wireless link comprises communicating the information relating to the status
4 of the buffer and information relating to the data rate in a reverse request message.

1 11. The method of claim 10, wherein communicating the reverse request message
2 comprises communicating the reverse request message on a reverse request channel
3 (R-REQCH).

1 12. The method of claim 11, wherein communicating the reverse request message
2 comprises communicating the reverse request message containing a first field to
3 represent a maximum traffic-to-pilot ratio, and a second field to represent a buffer
4 status.

1 13. The method of claim 12, wherein communicating the reverse request message
2 comprises communicating the reverse request message containing a third field having
3 an identifier to represent at least one of a service instance and a service class
4 associated with the reverse request message.

- 1 14. An article comprising at least one storage medium containing instructions that
2 when executed cause a system in a wireless communications network to:
3 communicate, in a reverse wireless link, a message having at least two fields
4 that contain information indicative of a data rate for transmission by a mobile station
5 in the reverse wireless link, the information based at least on one of buffer occupancy
6 and power headroom.
- 1 15. The article of claim 14, wherein communicating the message in the reverse
2 wireless link comprises communicating a message having a first field containing data
3 rate information and a second field for indicating whether the data rate information in
4 the first field is based on buffer occupancy or power headroom.
- 1 16. The article of claim 14, wherein communicating the message in the reverse
2 wireless link comprises communicating a message having a first field containing
3 power-related data rate information and a second field containing buffer-related data
4 rate information.
- 1 17. The article of claim 14, wherein communicating the message in the reverse
2 wireless link comprises communicating a message having a first field containing
3 power-related data rate information and a second field containing buffer occupancy
4 information.
- 1 18. The article of claim 14, wherein communicating the message in the reverse
2 wireless link comprises communicating a message having a first field containing
3 traffic-to-pilot ratio information, a second field containing buffer occupancy
4 information, and a third field containing an identifier of at least one of a service
5 instance and a service class associated with the buffer occupancy information.
- 1 19. The article of claim 14, wherein communicating the message in the reverse
2 wireless link comprises communicating a reverse request message on a code-division
3 multiple access (CDMA) 2000 reverse request channel (R-REQCH).

- 1 20. A mobile station comprising:
2 an interface to communicate with a base station over a wireless link;
3 a buffer to store data for communication over the wireless link to the base
4 station; and
5 a controller to send information relating to a status of the buffer and
6 information relating to a data rate over the wireless link to the base station.

- 1 21. The mobile station of claim 20, wherein the controller is adapted to send data
2 in the buffer on a reverse packet data channel (R-PDCH).

- 1 22. The mobile station of claim 21, wherein the controller is adapted to send the
2 information relating to the status of the buffer and information relating to the data rate
3 over the wireless link in a reverse request message on a reverse request channel (R-
4 REQCH).

- 1 23. The mobile station of claim 22, wherein R-REQCH is a code-division multiple
2 access (CDMA) 2000 R-REQCH.